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The evolution of wealth over the life cycle

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where a meaningful distinction exists between true zero and the value rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
E	use with caution
F	too unreliable to be published

Highlights

In this issue

The evolution of wealth over the life cycle

- This study uses a series of cross-sectional surveys to estimate the wealth accumulation process from the young adult years (ages 28 to 34) to the near-retirement period (ages 56 to 62) for three successive cohorts of Canadians who entered adulthood in 1977, 1984 and 1999.

- Net worth—assets less liabilities—is a primary indicator of household wealth. The median net worth trajectories changed little across cohorts as people approaching retirement held more than $200,000 per adult in net worth, primarily in the form of housing wealth and pension savings.

- The process of wealth accumulation differed across cohorts. More recent cohorts had much higher assets and debts, which also affected financial ratios across cohorts. For instance, the median debt-to-assets ratio among people in their late 30s was 39% in 2005, compared to 25% among similarly aged individuals two decades earlier.

- Although the wealth accumulation process generally became more unequal among recent generations of Canadians, the results differed by age group. Among young adults age 28 to 34, median net worth declined primarily because those in the bottom half of the distribution held less wealth than their counterparts in earlier cohorts. Among those in their late 30s, net worth grew among those near the top of the distribution, but did not change among those at the bottom.

- The findings reflect trends in home ownership. Among young adults, home ownership rates increased at the top of the distribution, and declined among those near the bottom. Among adults in their 30s, however, home ownership rates remained relatively stable over recent decades.

The evolution of wealth over the life cycle

Amélie Lafrance and Sébastien LaRochelle-Côté

Income is the most commonly used measure of household financial well-being. But what if there's an interruption in the flow of income? An unexpected expense? Plans to start a business? These circumstances, not to mention the necessity of funding one's retirement, highlight the importance of wealth accumulation to Canadian households.

Wealth is a financial reserve that allows people to smooth their consumption over their life cycle through borrowing, saving and investing. Savings and borrowing early in the life cycle can be used to fund education, family formation and the acquisition of housing. Wealth can then be accumulated as income increases relative to consumption and debts are paid down. In the latter stages of the life cycle, wealth may decline as some of it is used to maintain consumption following a decline in work-related income (Jappelli and Modigliani 2005).

The process of wealth accumulation may vary across cohorts—just as the age-earnings profile differs across cohorts. For example, Beaudry and Green (2000) found that the age-earnings profile of Canadian men shifted down for cohorts of a given age in the 1990s compared with cohorts in the same age group in the 1960s and 1970s, after controlling for education and experience. Similarly, Beach and Finnie (2004) reported a downward shift in the age-earnings profile of cohorts affected by the economic slowdown of the 1990s. Just as changing economic conditions have affected earnings, they may also affect the way people accumulate wealth. The study of differences in wealth accumulation across cohorts is no less important than earnings trends since it has implications for financial stability, retirement funding, and economic model building.

Most current sources of wealth data are cross-sectional, meaning that age differences have generally been studied cross-sectionally (Milligan 2005; Meh et. al. 2009). However, age group differences may not be representative of cohort differences, since the economic conditions faced by each cohort varied considerably. One way to study cohort differences is to follow birth cohorts through a succession of surveys because cross-sectional surveys are typically designed to be representative of the population in different age ranges. This synthetic cohort technique can be applied to wealth surveys conducted in 1977, 1984, 1999 and 2005 (see *Data sources and definitions*) in order to study the evolution of financial wealth over the life cycle and across selected cohorts of Canadians.

This paper examines whether earlier generations of Canadians accumulated more wealth than later generations, particularly in the early stages of the life cycle. It also addresses whether key financial ratios—like the debt-to-assets and the debt-to-disposable-income ratios—differed across cohorts. Finally, the paper examines whether assets, debts and net worth became more dispersed for later generations of Canadians.

The wealth accumulation process

In the early stages of the life cycle, wealth largely consists of housing and housing-related items (Milligan 2005). This is not a surprise since younger households accumulate assets either through property acquisition or through the accumulation of vehicles, furniture and other durable items to meet current consumption needs. As households age, property tends to gain in value, along with pensions and other forms of savings. Savings gains are expected among older households,

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Data sources and definitions

In Canada, information on the wealth of households is available from occasional cross-sectional surveys: the module on assets and debts of the 1977 Survey of Consumer Finances (SCF – 1976 income), the module on assets and debts of the 1984 SCF (1983 income), the 1999 Survey of Financial Security (SFS) and the 2005 SFS. Although the 1977 and 1984 assets and debts modules differ from the 1999 and 2005 SFS in terms of the scope of information collected, the aggregates are quite similar (see Chawla 2003 for a comparison of the 1984 SCF to the 1999 SFS). As a result, it was possible to derive several synthetic cohorts of households based on the age of the reference person.[1]

To increase the sample size, cohorts were based on multiple ages rather than a single birth year. The cohorts were constructed to represent key stages of the life cycle. The samples range from 650 to 2,400 households for 5 stages in the life cycle: young adults, prime working years, middle working years, late working years, and the near-retirement period. The sample characteristics are presented in Table 1.

Total assets are defined as the sum of financial assets (including deposits, stocks, bonds and mutual funds, and private pension assets),[2] non-financial assets (the value of the principal residence and other real estate,[3] and vehicles[4]) and business equity. Special calculations were required to ensure that pension assets were evaluated consistently over time (see *Imputing pension assets for the 1977 and 1984 samples*). Total liabilities or debts are defined as the sum of mortgage debt and other forms of debt like credit card debt and bank loans. The principal measure of wealth is net worth—the sum of financial and non-financial household assets, minus household debt and liabilities. All figures are reported on a per-adult basis as total household values have been divided by the number of adults (and, therefore, the number of potential savers) in the family. These figures should be closer to financial well-being because all potential savers should benefit from capital accumulation. All figures have been deflated using the All-Items Consumer Price Index and are expressed in 2010 constant dollars.

Table 1 Sample description

	Age class	Survey	Sample size
Life-cycle timing			
Young adults			
Cohort 1	28 to 34	1977 SCF	2,127
Cohort 2	28 to 34	1984 SCF	2,302
Cohort 3	28 to 34	1999 SFS	1,955
Prime working years			
Cohort 1	35 to 41	1984 SCF	2,023
Cohort 2	...	...	...
Cohort 3	34 to 40	2005 SFS	651
Middle working years			
Cohort 1	...	...	...
Cohort 2	43 to 49	1999 SFS	2,412
Cohort 3	...	...	...
Late working years			
Cohort 1	50 to 56	1999 SFS	2,061
Cohort 2	49 to 55	2005 SFS	767
Cohort 3	...	...	...
Near-retirement period			
Cohort 1	56 to 62	2005 SFS	662
Cohort 2	...	...	...
Cohort 3	...	...	...

Sources: Statistics Canada, Survey of Consumer Finances (SCF), 1977 and 1984; Survey of Financial Security (SFS), 1999 and 2005.

since they have had time to accumulate through employer pension plans, tax-preferred saving vehicles like RRSPs and other investments. Changes in wealth accumulation are therefore largely driven by changes in housing wealth accumulation and pension and investment accumulation.[7]

Recently, questions have been raised about the debt accumulation of younger generations of households, mainly due to increases in real estate prices since the late 1990s. It is also important to review the other factors that influence the decision to own or rent a property: economic conditions, life cycle events, and expected capital gains (Brown and Lafrance [forthcoming]).

The cost of purchasing a house is mainly driven by two factors: housing prices and interest rates. Mortgage rates were high in the late 1970s and 1980s, as 5-year rates remained above 10% throughout that period, spiking above 20% in 1981 (Chart A). Because of the higher rates, many younger Canadians opted to stay out of the housing market in the early 1980s (Brown and Lafrance [forthcoming]) and those who

Imputing pension assets for the 1977 and 1984 samples

Although a number of data concepts were consistently available in all surveys used, some calculations were required to make the data comparable across all cohorts. More particularly, the 1977 and 1984 modules on assets and debts contain little information on the pension assets of households. Pension assets included Registered Retirement Savings Plans, but no information was collected on employer pension plans. In contrast, this information was collected in the 1999 and 2005 SFS.

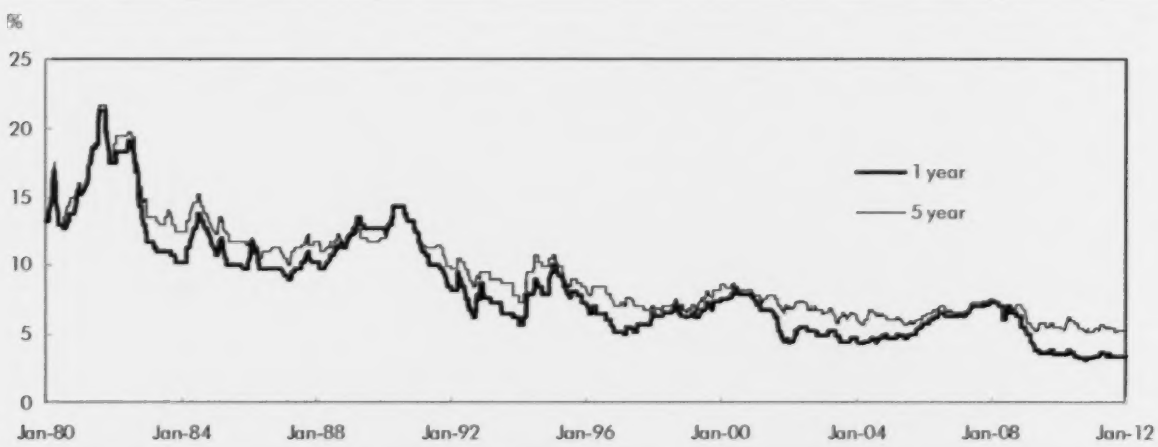
The 1999 SFS was used to calculate the proportion of pension assets in total assets for households in the 28-to-34 and 35-to-41 age groups. This information was also retrieved at the aggregate household level, using the National Balance Sheet, which contains estimates of household and unincorporated businesses' life insurance and pension assets. The shares obtained in the SFS were next divided by the 1999 shares obtained in the National Balance Sheet, and then multiplied by the 1977 and 1984 shares obtained in the National Balance Sheet to account for the changes that occurred over time (for example, pension and life insurance assets represented 12% of total assets in 1977 and 22% in 1999). The resulting shares were added to total assets for the 1977 and 1984 samples to derive a value of pension assets.[5,6]

In the 1977 assets and debts module, information was collected on the number of contributors to employer pension plans in the household. However, this information is not available in the 1984 assets and debts module. This variable is important as not every household contributes to a pension plan, and thus the value of pension assets should not be imputed for every household. As a result, an equation was estimated to determine the probability of a household member contributing to an employer pension plan using the 1977 sample. Using a logit model, it is estimated as a function of human capital and non-human capital characteristics

$$Pr(Y=j)=f(Earnings, HighestEduc, Occupation, NumEarn, Urban, Immigrant)$$

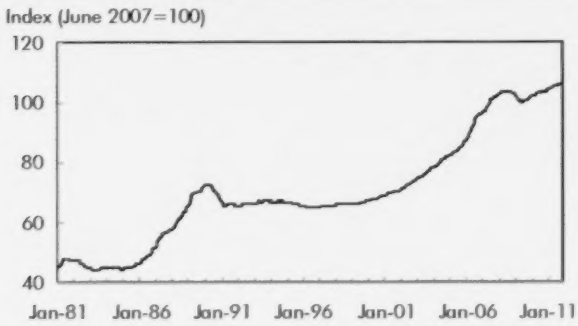
where $j=1$ if there is 1 (or more) household members contributing to an employer pension plan; *Earnings* are the total earnings of the household; *HighestEduc* is equal to 1 if the household head or his/her spouse have some postsecondary education or higher; *Occupation* is the occupation of the household head, based on the 1971 occupational classification; *NumEarn* is the number of earners in the household; *Urban* is equal to 1 if the household resides in a non-rural region; and *Immigrant* is equal to 1 if the household head is an immigrant. The equation is estimated for households in the 28-to-34 age group and also for households in the 35-to-41 age group. The estimated coefficients are applied to the 1984 sample for each age group to derive a predicted probability of having a household member contribute to an employer pension plan. Pension assets are then imputed for households with a predicted probability greater than 0.5.

Chart A Chartered bank - Conventional mortgage



Source: Financial market statistics, CANSIM Table 176-0041, January 1980 to January 2012.

Chart B New housing price index



Source: Statistics Canada, New Housing Price Indexes, CANSIM Table 327-0046, January 1981 to November 2011.

did buy generally opted for larger down payments and shorter amortization periods (Courchane and Giles 2002).

As interest rates fell in the mid- to late-1980s, the housing market picked up (Chart B) with prices reaching a new peak before another spike in interest rates coincided with a drop in prices, followed by stagnation through most of the 1990s. With a long-term trend towards lower interest rates, prices started to inch up in the late 1990s and accelerated through much of the 2000s. Young purchasers were therefore faced with conditions favouring lower down payments and longer amortization periods, practises that were also influenced by changes in mortgage lending rules and practices since the 1980s (Courchane and Giles 2002).

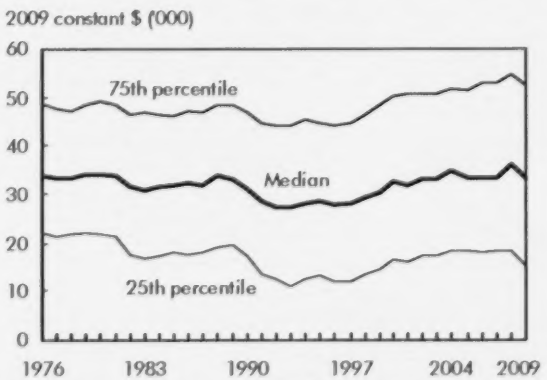
Prevailing economic conditions can also contribute to wealth differences across cohorts. In the early 1980s and 1990s, Canada experienced major economic slowdowns, which resulted in high unemployment rates among young adults (Gilmore and LaRochelle-Côté 2011). The employment difficulties experienced by young adults also translated into reduced median family earnings, particularly among those near the bottom of the distribution (Chart C). Because households typically require stable earnings and employment to buy a property, these particular cohorts might have delayed their first home purchase. Growth in median family earnings later resumed, but only those near the top of the distribution eventually surpassed their counterparts from the early 1980s.

Demographic characteristics have also changed across cohorts. Today's young adults study longer, begin their careers later and delay family formation (Blossfeld and Huinink 1991; Goldin 2004). Such trends can delay the purchase of a home, as well as affect the type of home purchased.

Finally, differences in housing wealth may also depend on the opportunity cost of capital—the gains that could have been earned from alternative investments (Goodman 1988). If, as was the case in the early 2000s, financial markets perform relatively poorly and housing prices increase, some might enter the housing market not only for consumption purposes, but also to improve investment returns.

Recent studies have yielded a number of insights on home ownership in Canada. First, even though ownership rates remained relatively stable among middle-aged Canadians, home ownership rose among young Canadians—but only among those near the top of the income distribution. Among households with a main income recipient age 20 to 34, home ownership increased from 38% in 1971 to 77% in 2006 for those in the top income quintile, while it fell from 31% to 19% for households in the lowest quintile (Hou 2010). Second, these changes had little to do with changes in

Chart C Family earnings (per adult equivalent) of economic families with a major income earner age 28 to 34



Note: Family earnings are reported on a before-tax basis.
Sources: Statistics Canada, Survey of Consumer Finances, 1976 to 1997; Survey of Labour and Income Dynamics, 1993 to 2009.

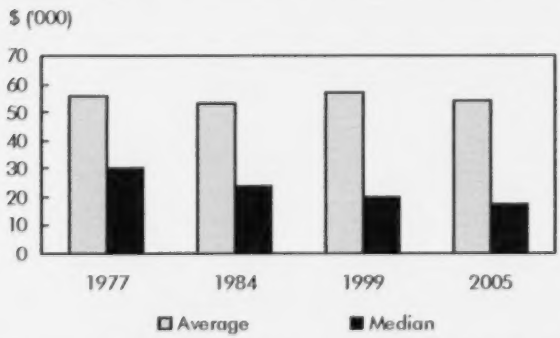
family types, as increases at the top of the distribution were mostly driven by individuals rather than families with children (Brown and Lafrance [forthcoming]). Hence, if the process of wealth accumulation changed across successive cohorts of young Canadians, the housing decisions of high-income unattached individuals are likely part of the picture. Cross-cohort differences in the wealth of younger households are examined in the next section.

Wealth among young adults

The primary measure of wealth is household net worth: the sum of financial and non-financial household assets, minus household debts and liabilities. In this section, net worth is examined among those age 28 to 34 in 1977, 1984, 1999, and 2005—years in which surveys on assets and debts were conducted by Statistics Canada. All figures are expressed in 2010 constant dollars[8] on a per adult basis—that is, they have been divided by the number of adults in the household to minimize the effect of changing household size over time.[9] The 1977 and 1984 cohorts entered the labour market in the late 1960s and the mid-1970s, respectively, while those in 1999 and 2005 entered the labour market in the early 1990s and the late 1990s.

In 1977, those age 28 to 34 reported an average net worth of $55,800 per adult, compared to $53,100 in 1984 (Chart D). Young adults in 1999 and 2005 reported $57,500 and $53,800 on average, respectively. At first glance, this would suggest that all four cohorts had similar levels of wealth.

Chart D Median and average net worth per household adult, age 28 to 34



Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

Median net worth, however, tells a different story. While mean wealth is sensitive to changes among the wealthiest members of a cohort, the median is not since it is the value dividing the wealthiest half of households from the least wealthy. Contrary to the mean results, median wealth declined for each subsequent cohort. In 1977, the median net worth was $30,100 per adult, falling to $23,700 in 1984, $20,000 in 1999 and $17,400 in 2005. However, when housing wealth was excluded from the analysis, medians were approximately the same for all four cohorts—indicating that the decline in median household wealth was primarily due to housing factors.[10]

Although median net worth cannot be decomposed into asset and debt components, some insight can be gained by examining the evolution of median asset and debt values (Table 2). Between 1977 and 1984, median household debt declined, from $14,400 to $8,500, but then rose over the rest of the period. In the 6 years between the 1999 and 2005 surveys, median debt grew by 26%. Meanwhile, median assets declined between 1977 and 1984, rose in 1999, only to decline again in 2005 to a level similar to the 1984 amount. So the decline in median net worth for young Canadian households is related to an increase in debt that was not accompanied by a corresponding increase in median assets.

Unlike the median, mean assets remained relatively stable over the period. In 1977, the mean value of the principal residence of 28- to 34-year-olds was $46,100 per adult. In 1984, that amount declined to $36,500 as ownership rates fell (from 57% to 50%) and interest rates rose. Subsequently, the average value of the principal residence increased to $45,700 in 1999 and to $53,500 in 2005. Correspondingly, mean debt also increased over the period. In 1999 and 2005, mortgage debt equalled 60% of the value of the principal residence, compared to about 45% in 1977 and 1984. Therefore, if the average net worth of young adults remained largely unchanged over the period, it is because mean housing-related assets and debts increased by a similar amount. Overall, mean assets and debts of all types increased by about $20,000 over the period, leaving mean net worth values unchanged.[11]

Table 2 Detailed assets and debts, young adults age 28 to 34

	1977	1984	1999	2005
			$	
Median household net worth	**30,100**	**23,700**	**20,000**	**17,400**
Median household assets	**61,300**	**48,000**	**54,600**	**43,100**
Median household debt	**14,400**	**8,500**	**18,800**	**23,700**
Mean household assets	**81,700**	**79,500**	**95,700**	**101,100**
Principal residence	46,100	36,500*	45,700	53,500
Other real estate	5,400	7,800	6,500	10,000
Vehicles	5,000	6,100*	6,400*	6,200*
Equity in business	13,100	13,000	13,000	6,700
Private pension assets	3,700	5,500*	14,400*	15,300*
Other financial assets	8,400	10,600*	9,700	9,400
Mean household debt	**25,900**	**26,300**	**38,300***	**47,200***
Mortgage on principal residence	19,800	14,800	28,600*	32,300*
Other debt	6,100	11,500*	9,700*	14,900*
Mean household net worth	**55,800**	**53,100**	**57,500**	**53,800**

Note: Other durables are excluded from the analysis for comparison purposes. Significance testing using the jackknife method was done for all average values, with the * indicating that the 1984, 1999 and 2005 values were different from the 1977 cohort at the 5% level of significance.
Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

Clearly, the explanation for the diverging trends in median and mean wealth among young adults relates to changes at various points of the income distribution. As noted by Hou (2010) and Brown and Lafrance (forthcoming), ownership rates increased disproportionately among higher-income households, thereby explaining why mean assets (and debt) held their ground while the median fell. The remainder of the study examines distributional differences for young adults and subsequent stages of the life cycle.

Evolution of wealth over the life cycle

How does wealth change over time, both across and within cohorts? Using available survey years and three cohorts of young adults, four life-cycle phases in addition to the young adult stage were identified:

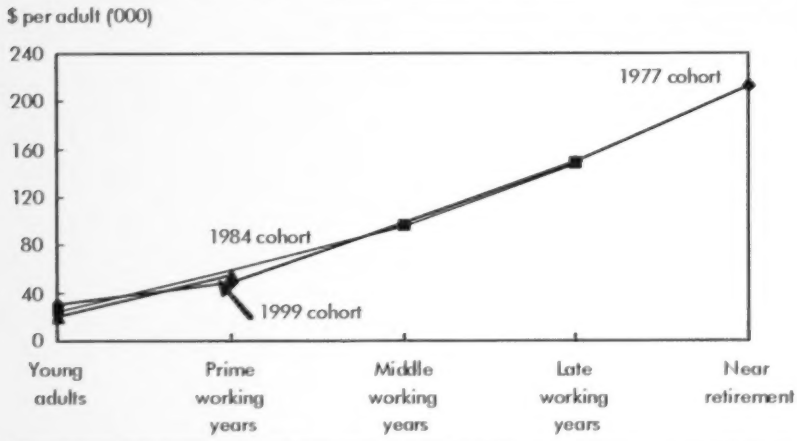
- the prime working years (late 30s);
- the middle working years (mid-40s);
- the late working years (early 50s);
- the near-retirement period (late 50s and early 60s).

Due to the timing of the surveys, each phase could not be accounted for in all three cohorts. Moreover, some cohorts are still too young to track the later stages of the life cycle. For instance, information from the 1999 cohort ends with the prime working years, while information for the 1984 cohort could not be collected beyond the late working years. Consequently, information for the near-retirement phase is only available for the first cohort.

Median net worth steadily increases with age (Chart E). Taking the 1977 cohort as an example, median net worth was about $30,000 per adult in the early stages of the life cycle, increased to more than $48,000 during the prime adult years, reached $148,000 in the late working years and about $213,000 in the near-retirement phase. The 1984 cohort followed a similar path. Median wealth for young adults from the 1999 cohort started below that of the other two cohorts, but surpassed the 1977 cohort in their prime working years, and is on a similar trajectory to the 1984 cohort. Despite different starting points, subsequent wealth accumulation converges across cohorts.

Despite the similarities in wealth accumulation, assets and debts differed across cohorts. More specifically, individuals from the most recent cohort reported higher levels of *both* assets and debt in their prime working years compared to the other two cohorts. Among prime-age individuals, median assets for the 1999 cohort ($118,000 per adult) were 52% higher than for the 1977 cohort ($78,000) (Chart F). Median

Chart E Median household net worth over the life cycle



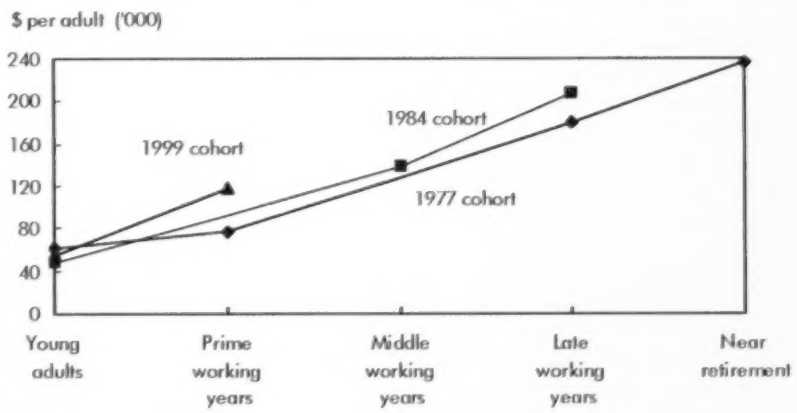
Note: The markers represent the periods for which data were available. Because data points were not available for the prime working years of the 1984 cohort and the middle working years of the 1977 cohort, they were estimated by taking the mid-value between the two nearest observable periods.
Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

were characterized by high interest rates and lower housing prices. In contrast, the 1999 cohort faced much higher housing prices, but also much lower interest rates, and they would typically borrow more than in the past to get into the housing market or to upgrade. This interpretation is borne out by the fact that all of the increase in average debt among prime-age individuals was due to rising mortgage debt on the principal residence. Mortgages on principal residences represented 76% of the debt of prime-age adults in the 1999 cohort, compared to just under 60% in the 1977 cohort. Similarly, the principal residence represented 55% of total assets of prime-age individuals in the 1999 cohort, compared with 46% in the 1977 cohort (data not shown).

debt diverged even more as the 1999 cohort owed $38,000 at the median, compared to $13,000 for the 1977 cohort (Chart G).[12] Hence, recent cohorts accumulated similar amounts of wealth to earlier cohorts by acquiring more assets and accumulating more debt.[13]

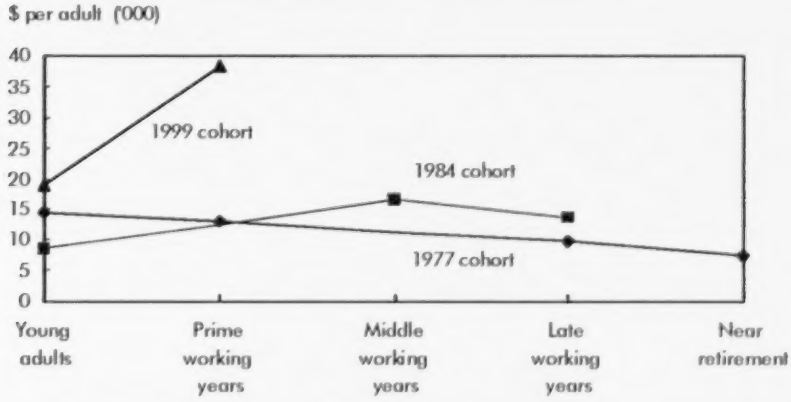
What happened to the most recent cohort, particularly with respect to prime-age people? In their case, home ownership cannot fully explain the changes that have occurred because rates remained relatively stable across successive cohorts of prime-age adults at around 65% (Hou 2010). Rather, changes in housing market conditions likely explain the changes in the evolution of median assets and debts—particularly for the youngest cohort. In the late 1970s and early 1980s, the housing markets

Chart F Median household assets over the life cycle



Note: The markers represent the periods for which data were available. Because data points were not available for the prime working years of the 1984 cohort and the middle working years of the 1977 cohort, they were estimated by taking the mid-value between the two nearest observable periods.
Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

Chart G Median household debt over the life cycle



Note: The markers represent the periods for which data were available. Because data points were not available for the prime working years of the 1984 cohort and the middle working years of the 1977 cohort, they were estimated by taking the mid-value between the two nearest observable periods.
Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

Since debt levels were on a higher trajectory in the 1999 cohort, financial ratios based on those debt levels may also differ from earlier cohorts.

Debt-to-income and debt-to-assets ratio

Total household debt can be expressed as a ratio of total household income or household assets. A ratio above 1.0 indicates that a household's stock of debt is greater than its annual flow of income or its current assets (Table 3). Although the debt–service ratio—debt payments divided by disposable income—is a more direct measure of debt burden, it cannot be calculated from the SCF or SFS data.[14] Nevertheless, the debt-to-income and debt-to-assets ratios reveal the potential sensitivity of households to changes in interest rates and asset values.

For both the 1977 and 1984 cohorts, median annual household income was consistently higher than household debt. However, the debt-to-income ratio did not evolve in the same way in each cohort. Among those who were age 28 to 34 in 1977, the debt–to-income ratio declined, from 0.55 when they were young adults to 0.35 when they were in their late working years, and to 0.24 as they approached retirement. Among those who were age 28 to 34 in 1984, the median debt-to-income ratio was just 0.33 (because fewer had bought homes), but eventually rose to nearly 0.50 in their middle working years (with the purchase of housing), before declining to 0.41 in their late working years. Differences were even more marked for individuals in the 1999 cohort, as they had a median debt-to-income ratio of 0.72 as young adults, rising to 1.09 in their prime working years.

Most of the fluctuations across the life cycle and across cohorts were due to mortgages. When

Table 3 Median debt-to-income and debt-to-assets ratios over the life cycle

	1977 cohort	1984 cohort	1999 cohort
		ratio	
Debt-to-income ratio			
Young adults	0.55	0.33	0.72
Prime working years	0.41	...	1.09
Middle working years	...	0.49	...
Late working years	0.35	0.41	...
Near retirement	0.24	...	...
Debt-to-assets ratio			
Young adults	0.35	0.32	0.48
Prime working years	0.25	...	0.39
Middle working years	...	0.17	...
Late working years	0.09	0.10	...
Near retirement	0.03	...	...

Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

mortgages were excluded, the debt-to-income ratio did not exceed 0.10 at any point in the life cycle for the first two cohorts, and was slightly above 0.15 for those in the 1999 cohort (data not shown).

For the debt-to-assets ratio, the greatest contrast was again between the most recent cohort and the previous ones. In 1977, young adults had debt equal to 35% of their total assets, a proportion that declined to just 3% by their late working years. Similarly, young adults in 1984 had debt equalling 32% of their assets, before declining to 10% in their late working years. In contrast, younger adults from the 1999 cohort had debt equalling 48% of assets, declining to 39% in their prime working years. This compares to 25% among prime-age individuals from the 1977 cohort. By all measures, the 1999 cohort was the most indebted.

Dispersion measures

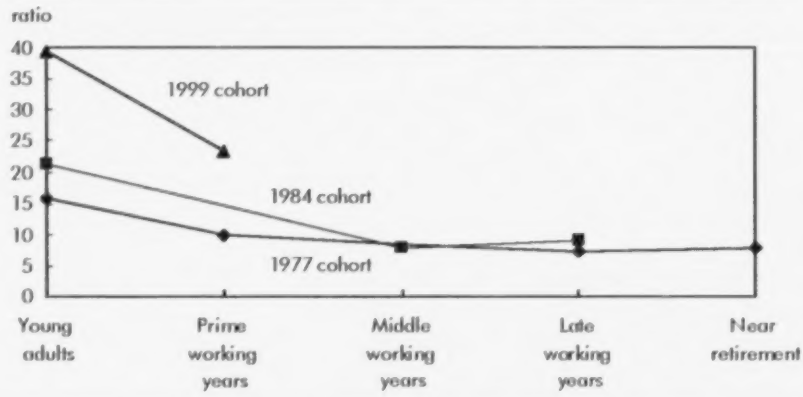
Central tendency measures, like the mean and median, present a profile of household wealth for an average or typical household. However, the median and averages do not always provide a consistent storyline. In the case of young adults, for instance, median wealth declined for more recent cohorts while the mean increased due to substantial increases in home ownership at the top of the income distribution. This suggests that wealth may be more unequally distributed among more recent cohorts of young adults.[15] Dispersion measures can illustrate how wealth inequality has evolved.

Dispersion, however, may also differ over the life cycle. In an earlier cohort-based study, LaRochelle-Côté et al. (2008) found that family income became much less dispersed (or more equal) as cohorts aged. Similar findings for wealth would imply that older households will accumulate increasingly similar amounts of wealth, even if they have different levels of net worth at the beginning. Both within- and cross-cohort results are examined in this section.

One widely used measure of dispersion is the P75/P25 ratio—the wealth of a household at the 75th percentile divided by the wealth of a household at the 25th percentile. A P75/P25 ratio of 3.0, for example, would mean that a household at the 75th percentile is three times wealthier than a household at the 25th percentile. Results indicate that the dispersion of net worth is highest among young adults, but generally decreases as cohorts age (Chart H). Note that the dispersion of wealth increased across cohorts in the early stages of the life cycle. Even though the P75/P25 for the 1984 cohort eventually converged with the 1977 cohort, dispersion measures for the 1999 cohort are still well above the other cohorts. Thus net worth is more unequally distributed among more recent cohorts of young and prime-age adults than among earlier cohorts.

Why has the net worth of younger adults become more dispersed? One way to answer this question is to decompose net worth into assets and debts at various points of the distribution. Three ranges were chosen for this analysis:

Chart H P75/P25 ratio of household net worth over the life cycle



Note: The markers represent the periods for which data were available. Because data points were not available for the prime working years of the 1984 cohort and the middle working years of the 1977 cohort, they were estimated by taking the mid-value between the two nearest observable periods.
Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

- one-fifth of the population centred on the 25th percentile (lower range)
- one-fifth centred on the median (middle range)
- one-fifth centred on the 75th percentile (higher range).[16]

Mean wealth values calculated for these ranges are very similar to the percentile values shown in Chart H, with the added benefit of being decomposable into mean assets and debts (Table 4).

Among young adults in the lower range, household net worth declined from an average $5,800 per adult in 1977 to $2,600 per adult in 1999—a decline of 55%. In the middle range, average net worth fell by 32%—from $31,100 in 1977 to $21,100 in 1999. Average net worth in the higher range also fell over the period, but by 10% (from $74,300 to $66,800). Therefore, the declines were mostly concentrated in the bottom half of the wealth distribution.

In the lower range, the decline in net worth was mainly a function of declining assets. In the middle range, both assets and debts declined between 1977 and 1984. Both grew between 1984 and 1999, but assets did not increase as quickly as debt, resulting in a lower net worth. So for young adults at the middle and bottom of the wealth distribution, cross-cohort increases in debt were not accompanied by corresponding increases in assets. In contrast, net worth did not decline as much among those at the top because the growth in assets compensated for more of the growth in debt. For young adults, it is therefore a matter of concentration of assets at the top of the distribution, as evidenced by the rising home ownership rates seen at the top of the distribution (Brown and Lafrance [forthcoming]).

Among prime-age households, dispersion also increased as net worth remained stable in the lower range, but increased significantly in the middle and upper ranges—mainly because assets grew faster than

Table 4 Decomposition of net worth at key points of the distribution

	Young adults			Prime working years		
	25th percentile[1]	Median[2]	75th percentile[3]	25th percentile[1]	Median[2]	75th percentile[3]
			$			
Median net worth						
1977	4,600	30,100	71,900	10,700	48,500	104,800
1984	2,900	23,700	61,900	...	...	...
1999	1,600	20,000	61,300	5,400	54,600	126,900
Average net worth						
1977	5,800	31,100	74,300	12,300	47,600	103,400
1984	3,700*	24,200*	62,400*	...	...	...
1999	2,600*	21,100*	66,800*	10,300	61,900*	151,700
Average assets						
1977	16,200	64,700	108,300	28,700	81,200	134,000
1984	10,600*	50,700*	95,200*	...	...	...
1999	12,400	62,200	124,900*	30,600	131,900*	227,300
Average debt						
1977	10,500	33,600	34,000	16,400	33,600	30,600
1984	6,900	26,500*	32,800	...	...	...
1999	9,800	41,200	58,100*	20,200	70,000*	75,600

1. Between the 15th and 35th percentiles of net worth.
2. Between the 40th and 60th percentiles of net worth.
3. Between the 65th and 85th percentiles of net worth.

Note: Significance testing using jackknife method was done for all average values, with the * indicating that the 1999 and 1984 values were different from the 1977 cohort at the 5% level of significance.

Sources: Statistics Canada, Survey of Consumer Finances, 1977 and 1984; Survey of Financial Security, 1999 and 2005.

debt between 1977 and 1999. Most of the increase in assets was due to an increase in real estate assets. Because ownership rates among top income individuals in that age group changed little over the period (Brown and Lafrance [forthcoming]), changing market conditions (such as higher housing prices, lower interest rates, and changes in institutional lending practices) clearly had a major influence on the value of real estate owned by prime-age households.

Conclusion

Wealth is a fundamental element of the economic well-being of individuals and families. Although other studies of wealth have examined the net worth of seniors and non-seniors, fewer studies have examined the evolution of wealth over the life cycle, and in particular whether more recent generations accumulate wealth differently than earlier cohorts. To answer these questions, this study identified three synthetic cohorts to examine how wealth evolved in each of these cohorts.

The first major finding of this study is that median net worth trajectories differed little across cohorts. Those approaching retirement in these cohorts held about $213,000 per adult in net worth, because of gains in both the value of their real estate assets and in the value of their pension savings.

The process of wealth accumulation, however, differed across cohorts, mainly because more recent cohorts accumulated more debts and assets than their earlier counterparts. A closer look revealed that asset and debt trends varied across income distributions.

Among those age 28 to 34, wealthier households were generally able to build assets roughly in line with increases in debt. This is consistent with research indicating that while home ownership rates changed little across cohorts of young adults, those who were near the top of the income distribution in recent cohorts were more likely to own than their earlier counterparts (Brown and Lafrance [forthcoming]).

Among prime-age adults, assets grew among those located near the middle and near the top of the distribution, even though debt levels rose across the distribution. Wealth gains were again due to housing—not so much because of an increase in ownership, but because housing market conditions were such that these households had larger housing-related assets on their balance sheet.

The implication is that wealth became more dispersed among recent generations of Canadians (born in the late 1960s). More research will be required to assess whether dispersion will continue for this generation during their peak asset-building years.

Perspectives

Notes

1. In both years of the SCF, a small number of observations were labeled "special family units," which were sampled to improve the representation of the asset and debt holdings of Canadians at the upper end of the income and wealth distributions. These are removed from the 1977 and 1984 samples as the demographic information for these units is unobservable.
2. Registered Education Savings Plans are not included.
3. The 1977 module on assets and debts of the SCF does not contain the value of any real estate other than the principal residence. However, it does include the equity in this type of real estate, that is, the market value of the residence minus the principal outstanding in the mortgage. Since only households between 28 and 34 years of age are used in this survey, and few (approximately 15%) in this age group own a second residence, the use of equity as a proxy for the value of other real estate will add a small downward bias in the value of real estate assets relative to the other years under study.
4. Other non-financial assets, like furniture, were not included because they were not available in the 1977 and 1984 assets and debts module of the SCF. However, other non-financial assets typically represent a very small portion of overall assets.
5. It could be argued that imputing a value for pension assets might greatly influence the results given that pension assets represented 16% and 24% of total assets for households with two contributors in the 28-to-34 and 35-to-41 age groups, respectively, in 1999. However, sensitivity checks were undertaken using the proportion of life insurance and pension assets in total assets in 1977 and 1984 taken from National Accounts data and the results were qualitatively similar.
6. Reported RRSPs were then added to the value to obtain private pension assets.
7. On average, owner-occupied dwellings accounted for about 39% of household assets and home mortgages accounted for 62% of household liabilities for household and unincorporated businesses in 2009. The amounts related to private pensions, bonds and shares represented another 39% of total assets (Statistics Canada 2012).

8. The All-Items Consumer Price Index (CPI) was used as the deflator.

9. This method is the closest approximation of the number of savers in the family, who are most likely to be the owners of capital. Results obtained on a per capita basis—dividing all of the amounts by the number of persons in the household instead of by the number of adults—were very similar.

10. The possibility of passive accumulation of wealth by, say, an inheritance from relatives, remains. If households expect a positive income shock in the future, they may accumulate less wealth at a younger age. However, this possibility cannot be evaluated with existing data sources.

11. Private pension assets (including RRSPs) also significantly increased over the period. A large driver of the increase in private pension assets was due to an increasing share of RRSPs, which saw an expansion in participation and average holdings over the period (Milligan 2005).

12. The increase in debt was also confirmed by data from the Canadian Financial Capability Survey (CFCS), conducted 4 years later than the 2005 SFS. In 2009, the median debt of individuals correspondingly 4 years older (38 to 44) than people in their prime in 2005 (34 to 40) was $87,400, which suggests that debt levels continued to rise among individuals who were age 28 to 34 in 1999.

13. Up until the middle working years, the vast majority of assets relate to housing and real estate items. After the middle working years, the share of pensions as a proportion of overall assets increases, from one-third in the late working years to about 40% during the near-retirement years.

14. The debt-to-income ratio is not an ideal measure because it compares a stock with an income flow. In the absence of the debt–service ratio, however, the debt-to-income measure is generally considered a valid alternative (Meh et al. 2009).

15. Morissette and Zhang (2006) also found that the dispersion in net worth increased among young adults.

16. Expressed another way, these ranges comprise the 15th to 35th percentiles, the 40th to 60th percentiles, and the 65th to 85th percentiles.

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